DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-001761
Date Inspected: 14-Mar-2008

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 600
OSM Departure Time: 1730
Location: Shanghai, China

CWI Name:	Huang Wen-Pang, Hu Wei Qing			**CWI Present:**	☑ Yes	☐ No	
Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☑ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Approved WPS:**	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: Tower & OBG

Summary of Items Observed:

The Caltrans Quality Assurance (QA) Inspector Charlie Franco was present at the time requested to randomly observe welding and associated operations being performed for the Tower and Orthotropic Box Girders (OBG).

Bay 7 OBG:

The QA Inspector randomly observed ZPMC Welders Wang Linjiang ID Number 051356 and Chen Chuan Zong ID Number 044824, utilizing the Flux Cored Arc Welding (FCAW) Process with ZPMC Weld Procedure Specification (WPS) WPS-B-T-2132-3 in the 2F (Flat Fillet) position to weld Connection Plates piece mark X3H for Floor Beam Diagonals. The QA Inspector randomly observed ZPMC CWI Huang Wen-Pang monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 297 amps, 30.2 volts with a travel speed of 437 millimeters (mm) per minute for Mr. Wang and 300 amps, 30.1 volts with a travel speed of 436 mm per minute for Mr. Chen. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC Welder Sun Ling Ling ID Number 048047, utilizing the Shielded Metal Arc Welding (SMAW) Process with ZPMC WPS WPS-B-P-2112 in the 2F (Horizontal Fillet) position to tack weld the flange to the web on Floor Beam Diaphragm FB005-04. The QA Inspector randomly observed ZPMC CWI Huang Wen-Pang monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC Welders Zhang Qing Quang ID Number 044744 and Dan Deyin ID

Number 044795, utilizing the FCAW Process with ZPMC WPS WPS-B-T-2132-3 in the 2F (Flat Fillet) position to weld various stiffeners to Floor Beam Sub-Assembly FB003-11. The QA Inspector randomly observed ZPMC CWI Huang Wen-Pang monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 297 amps, 29.8 volts with a travel speed of 442 mm per minute for Mr. Zhang and 296 amps, 29.6 volts with a travel speed of 445 mm per minute for Mr. Dan. Weld parameters appeared to comply with contract requirements.

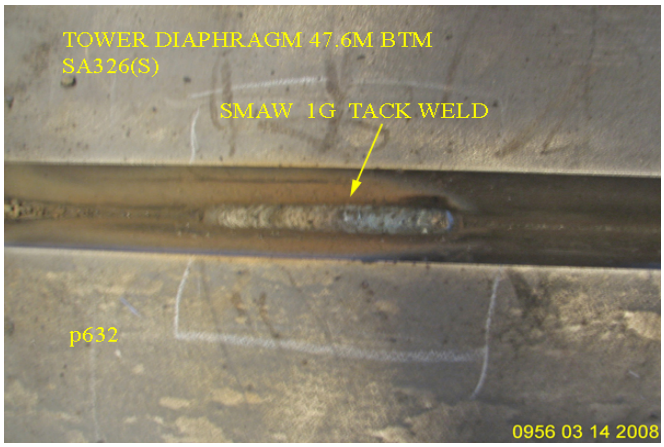
The QA Inspector randomly observed ZPMC Non-Destructive Testing Technician Zhong Dongyun, utilizing the Magnetic Particle Testing (MT) Method, to examine the cover passes on WJ's FB018-01-109/110 on Floor Beam FB018-01. There appeared to be no indications and Mr. Zhong accepted both welds.

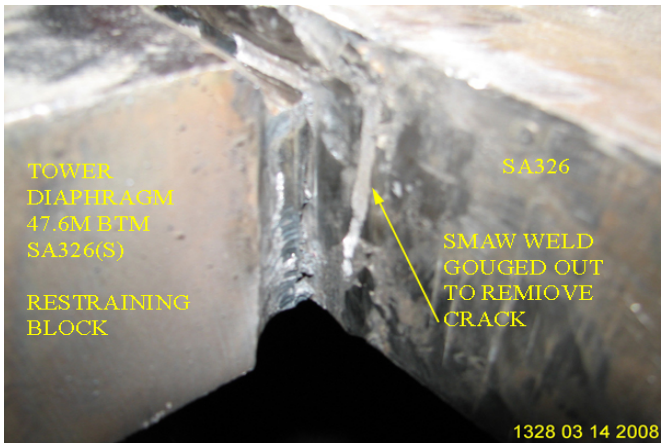
Bay 8 Tower:

The QA Inspector randomly observed ZPMC Personnel performing heat straightening operations on Tower Diaphragm Sub-Assembly 28M Top SA316(W) per HSR1(T)-136, 28M Top SA334(S) per HSR1(T)-126, 47.6M BTM SA326(N) per HSR1(T)-074 & 38M Top SA277(S) per HSR1(T)-127.

The QA Inspector randomly observed ZPMC Welder Yun Chengxian ID Number 045138, utilizing the SMAW Process in the 1G (Flat Groove) position with WPS-B-T-3311-TC-P4, to tack weld piece marks SA326(S)and p632(S) of 47.6M BTM Tower Diaphragm. The QA Inspector randomly observed ZPMC CWI Huang Wen-Pang monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 190 amps and 22 volts. Weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

The QA Inspector randomly observed ZPMC welding personnel utilizing grinders to remove weld metal from the welds attaching the restraining blocks to the 47.6M Tower Diaphragm Assembly SA326(S). American Bridge/Fluor Enterprises Representatives Don Walton and Dan McDonald informed the QA Inspector that one of the welds attaching the temporary restraining blocks had cracked, and that the crack had been removed first by Carbon Air Arc Gouging and then by grinding. Mr. Walton then informed the QA Inspector that the bevel size was also being increased to allow for more weld and less chance of any of the welds attaching the temporary restraining blocks to crack during the tack welding. The attached photograph provides additional detail.





WELDING INSPECTION REPORT

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Summary of Conversations:

As noted in the above body of this report.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Franco,Charlie	Quality Assurance Inspector
Reviewed By:	Hager,Craig	QA Reviewer